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BAKON 13 in 1

BAKON 90W LED Digital Soldering Iron Kit User Manual

Model: 13 in 1
Brand: BAKON

1. Important Safety Information

Please read all safety instructions carefully before using the soldering iron kit. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always wear appropriate eye protection (safety glasses) when soldering.
- Ensure adequate ventilation in your workspace to avoid inhaling solder fumes. Consider using a fume extractor.
- The soldering iron tip reaches very high temperatures (up to 896°F/480°C). Avoid direct contact with the tip or heating element.
- Place the soldering iron in its stand when not in use to prevent accidental burns or damage to surfaces.
- Keep the soldering iron and all components out of reach of children and pets.
- Do not use the soldering iron near flammable materials or liquids.
- Always unplug the soldering iron when not in use or before performing maintenance.
- Ensure the power supply voltage matches the requirements of the soldering iron (110V for US plugs).
- Do not use the soldering iron if the cord or plug is damaged.

2. Package Contents

The BAKON 90W LED Digital Soldering Iron Kit includes the following items:



Figure 2.1: Overview of the BAKON 90W Soldering Iron Kit and its components.

- 90W LED Digital Soldering Iron
- 5 x Solder Iron Tips (various shapes: 900-I, 900-B, 900-K, 900-3C, 900-2.4D)
- Soldering Iron Holder with Cleaning Sponge
- 0.8mm Rosin Core Soldering Wire
- No-Rinse Rosin Flux Paste
- Desoldering Pump
- Tweezers (Anti-static)
- Instruction Manual (this document)
- Convenient Carrying Case

3. Setup

Before beginning any soldering work, ensure your workspace is clean, well-ventilated, and free of flammable materials. Prepare

the soldering iron and accessories as follows:

1. **Prepare the Soldering Iron Stand:** Place the metal spring holder into the designated slots on the stand. Wet the cleaning sponge with water and place it in the sponge tray. The sponge should be damp, not soaking wet.



Figure 3.1: Initial setup steps including preparing the soldering iron stand and sponge.

2. **Install a Soldering Tip:** The kit includes five different soldering tips. Choose the appropriate tip for your task. Unscrew the sheath nut, insert the desired tip into the heating element, and then re-tighten the sheath nut. Ensure the tip is securely seated.

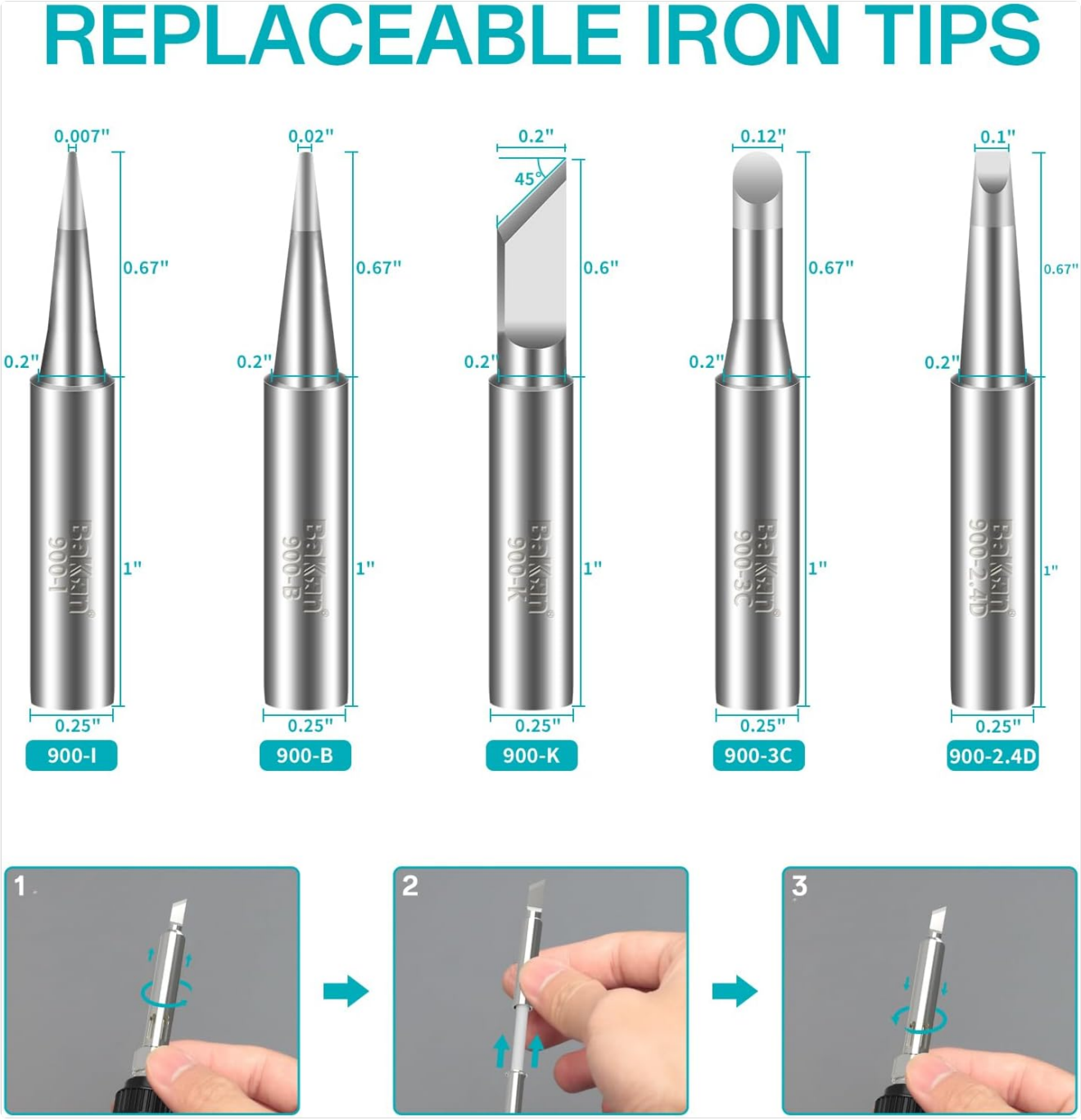


Figure 3.2: Various soldering tips and the process of tip replacement.

3. **Connect Power:** Plug the soldering iron into a standard 110V AC power outlet. The LED display will illuminate, and the iron will begin to heat up automatically.

4. Operating Instructions

This section details how to operate your BAKON 90W LED Digital Soldering Iron.

4.1 Temperature Adjustment

The soldering iron features a clear LED display for precise temperature control. The temperature range is 356°F-896°F (180°C-480°C).

- **Increasing Temperature:** Short press the "+" button to increase the temperature by 1°C/°F. Long press to continuously increase the temperature.
- **Turning Off Heating:** If the temperature rises to 480°C (896°F), hold down the "+" key to turn OFF the heating.
- **Temperature Compensation:** The iron supports temperature compensation. Refer to the video for detailed instructions on this advanced feature.

- **Unit Conversion (°C/°F):** To switch between Celsius and Fahrenheit, press and hold both the "+" and "-" buttons simultaneously.

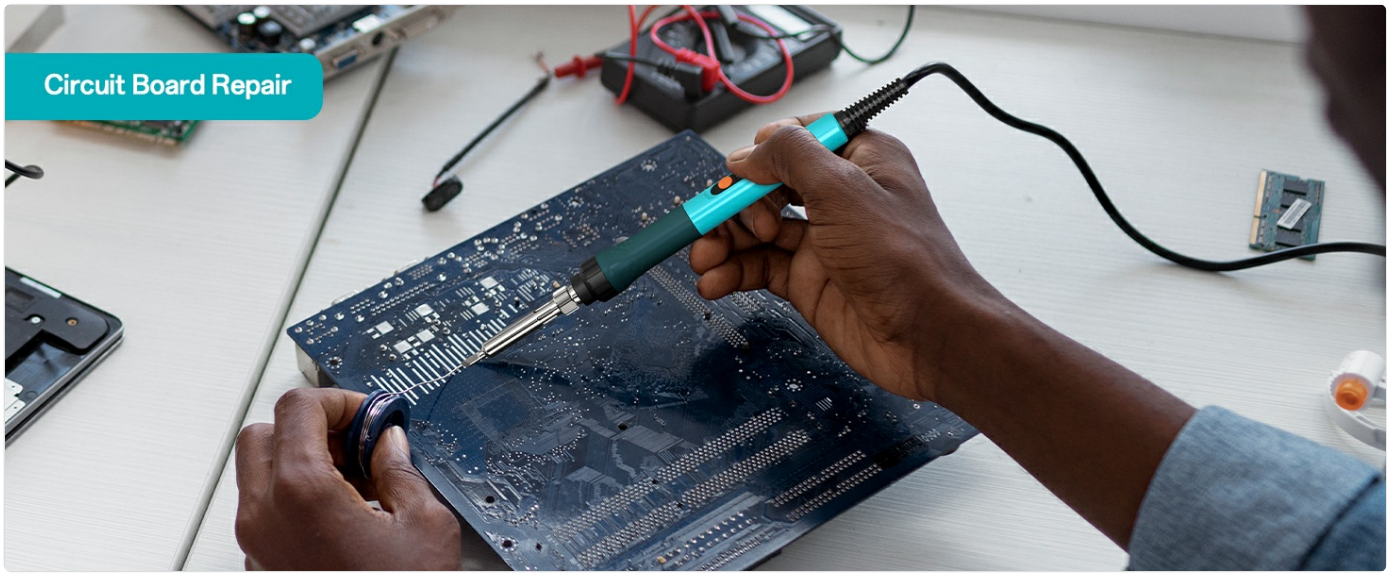


Figure 4.1: Adjusting temperature and switching units on the LED display.

4.2 Auto-Sleep Feature

The digital welding iron is equipped with an auto-sleep function to extend the life of the heater core and enhance safety. If the iron is placed in its holder and remains inactive for 10 minutes, it will automatically enter sleep mode and cool down.

- **Hibernation Setting:** The hibernation time can be set between 1 and 60 minutes. Refer to the video for instructions on how to adjust this setting.
- **Waking Up:** To wake the iron from sleep mode, simply pick it up from the stand or press any button. It will quickly return to the set temperature.

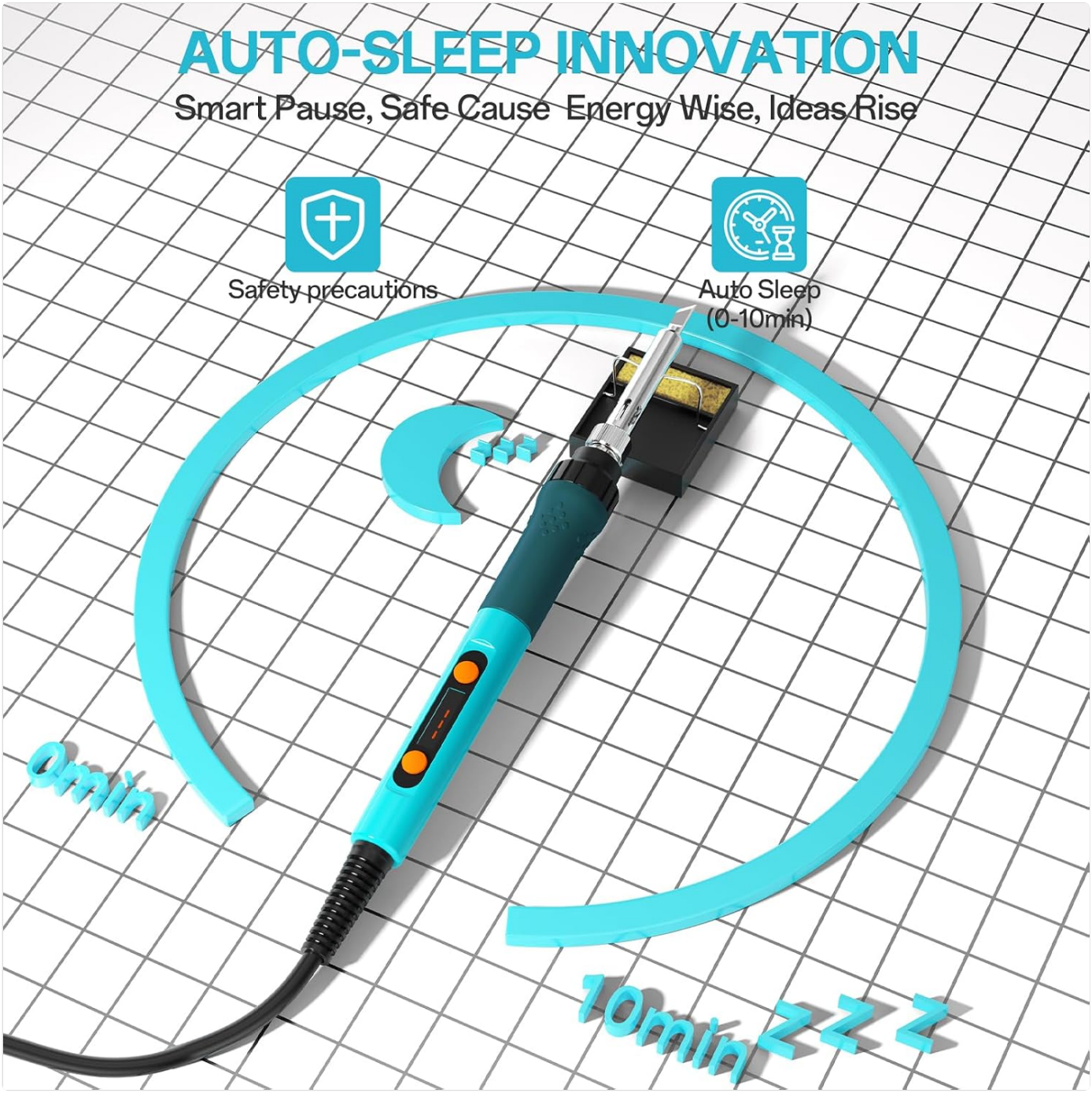


Figure 4.2: The auto-sleep feature conserves energy and prolongs iron life.

4.3 Soldering and Desoldering Techniques

This kit provides tools for both soldering and desoldering. Proper technique ensures strong, reliable connections.

- **Soldering:**
  a. Ensure the soldering iron tip is clean and tinned (coated with a thin layer of solder).
  b. Heat both the component lead and the PCB pad simultaneously with the soldering iron tip.
  c. Apply solder to the heated joint, not directly to the iron tip. The solder should flow smoothly and create a shiny, cone-shaped joint.
  d. Remove the solder, then remove the iron. Allow the joint to cool naturally without disturbance.

- **Desoldering with Desoldering Pump:**
  a. Push down the plunger of the desoldering pump until it locks.
  b. Heat the solder joint with the soldering iron until the solder melts.
  c. Quickly place the nozzle of the desoldering pump over the molten solder and press the release button. The pump will suck up the molten solder.

d. Repeat if necessary until the joint is clean.

- **Using Flux Paste:** Apply a small amount of rosin flux paste to the joint before heating. Flux helps clean the surfaces and improves solder flow, leading to better joints.



Figure 4.3: The kit includes tools like a desoldering pump and tweezers for comprehensive soldering tasks.

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Video 4.1: A comprehensive guide to setting up, adjusting temperature, using auto-sleep, and performing basic soldering and desoldering operations with the BAKON 13-in-1 kit.

5. Maintenance

Proper maintenance ensures the longevity and optimal performance of your soldering iron kit.

- **Tip Cleaning:** Always clean the soldering iron tip before and after use by wiping it on the damp sponge or using a brass wire cleaner. This removes oxidation and old solder, ensuring efficient heat transfer.
- **Tip Tinning:** After cleaning, re-tin the tip with a small amount of fresh solder. This protects the tip from oxidation and prolongs its life.

- **Storage:** When not in use, ensure the soldering iron is unplugged and completely cooled. Store all components in the provided carrying case to protect them from dust and damage.
- **Desoldering Pump Maintenance:** Periodically disassemble the desoldering pump and clean out any accumulated solder from the nozzle and chamber.
- **General Cleaning:** Wipe down the soldering iron handle and other tools with a clean, dry cloth. Do not use abrasive cleaners or solvents.

6. Troubleshooting

This section addresses common issues you might encounter with your soldering iron kit.

Problem	Possible Cause	Solution
Soldering iron not heating up.	Not plugged in; power outlet issue; faulty heating element; auto-sleep active.	Check power connection and outlet. If in auto-sleep, pick up the iron. If still not heating, contact support.
Solder not melting or poor solder joints.	Temperature too low; dirty/oxidized tip; insufficient contact with joint; old solder.	Increase temperature. Clean and re-tin the tip. Ensure good contact with both component and pad. Use fresh solder.
Excessive smoke during soldering.	Poor ventilation; burning flux/insulation.	Ensure adequate ventilation. Use a fume extractor. Avoid overheating components.
Desoldering pump not effective.	Nozzle not sealed against joint; pump clogged with solder.	Ensure tight seal. Clean out accumulated solder from the pump.

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please contact BAKON customer support for assistance.

7. Specifications

Detailed technical specifications for the BAKON 90W LED Digital Soldering Iron Kit:

Feature	Detail
Model Number	13 in 1 (BK606A)
Wattage	90 Watts
Temperature Range	356°F - 896°F (180°C - 480°C)
Heating Element	Advanced Insert Ceramic Heater Core
Heat-up Time	Approximately 15 seconds
Display Type	LED Digital Display
Auto-Sleep Function	Yes (adjustable 1-60 minutes, default 10 minutes)
Power Source	AC (110V US plugs compatible)
Item Weight	13.1 ounces
Handle Material	Silicone (heat-resistant)

Feature	Detail
Special Features	Lightweight, Dual Switch Design, Temperature Calibration
Included Components	Soldering Iron, 5 Solder Tips, Soldering Iron Stand, Solder Wire, Rosin Flux Paste, Desoldering Pump, Anti-static Tweezers, Carrying Case

8. Warranty and Support

BAKON is committed to providing high-quality products and customer satisfaction. For any product-related inquiries, technical support, or warranty claims, please contact our customer service team.
Please refer to your purchase documentation or the BAKON official website for specific warranty terms and contact information.

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